Amendments to the Drawings:

Fig. 19 has been amended to be labeled as "Prior Art" and to change reference numeral 13 to "12" at the lower left portion thereof in accordance with the specification at page 9, lines 11 and 23.

Attachments: Replacement Sheet

Annotated Sheet Showing Changes

R E M A R K S

Reconsideration of this application, as amended, is respectfully requested.

THE DRAWINGS

Fig. 19 has been amended to be labeled as "Prior Art" and to change reference numeral 13 to "12" at the lower left portion thereof in accordance with the specification at page 9, lines 11 and 23.

Submitted herewith are a corrected sheet of formal drawings which incorporates the amendments and an annotated sheet showing the changes made thereto.

No new matter has been added, and it is respectfully requested that the amendments to Fig. 19 be approved and entered.

THE ELECTED CLAIMS

Claim 1 has been amended to recite the features of the present invention in more structural terms, based on the subject matter of claim 2 and (now canceled) claim 3 and the disclosure in the specification at, for example, page 13, line 21 to page 20, line 27.

In addition, claim 2 has been amended to positively recite a light source of the transmitted illuminative light, and to more clearly recite the structure of the mirror moving section, based

on the disclosure in the specification at, for example, page 16, line 24 to page 17, line 6 and page 19, line 24 to page 20, line 21.

Claims 1 and 2, moreover, have been amended to make some minor grammatical improvements and to correct some minor antecedent basis problems so as to put them in better form for issuance in a U.S. patent.

And new independent claims 45 and 46 have been added to more broadly recite the subject matter of amended claim 1.

No new matter has been added, and it is respectfully requested that the amendments to claims 1 and 2 and the addition of new claims 45 and 46 be approved and entered.

THE WITHDRAWN CLAIMS

Withdrawn independent claim 20 has been amended to depend from amended independent claim 1, and withdrawn claims 4, 5, 7, 9-12, 14, 15, 17-21, 23-41, 43 and 44 have been amended to better accord with amended independent claim 1 and/or to make some minor grammatical improvements and to correct some minor antecedent basis problems so as to put them in better form for issuance in a U.S. patent.

If claim 1 is found to be allowable, it is respectfully requested that claims 4-44 depending therefrom also be considered on the merits and allowed.

THE PRIOR ART REJECTION

Claims 1 and 3 were rejected under 35 USC 102 as being anticipated by "Total Internal Reflection Fluorescence at Biological Surfaces," by Daniel Axelrod ("Axelrod"), and claim 2 was rejected under 35 USC 103 as being obvious in view of Axelrod as well as the combination of Axelrod and USP 4,972,258 ("Wolf et al") or USP 5,866,911 ("Baer"). These rejections, however, are respectfully traversed with respect to the claims set forth hereinabove.

According to the present invention as recited in amended independent claim 1, a total internal reflection fluorescence microscope is provided which comprises: at least one objective lens which takes light from a specimen; an image pick-up device which picks up an image of the light taken into the objective lens; an observation optical path via which the light taken into the objective lens is condensed onto the image pick-up device; a condenser lens, which is disposed in a position facing the objective lens via the specimen, which has a numerical aperture that makes possible total internal reflection illumination, and which guides a transmitted illuminative light into the specimen; a base including an upper portion that holds the condenser lens; a laser oscillation unit which outputs a laser beam; an optical fiber which transmits the laser beam output from the laser

oscillation unit; a reflection mirror provided at a lower portion of the base to introduce the laser beam output from the optical fiber into a vicinity of an outermost portion of the condenser lens; and a condensing lens which condenses the laser beam output from the optical fiber, such that the laser beam is condensed at a condensing position in a vicinity of a front focal position of the condenser lens.

Thus, according to the present invention as recited in amended independent claim 1, the reflection mirror is provided at the lower portion of the base, and the condenser lens is provided at the upper portion of the base. New independent claim 45, moreover, also recites this feature of the present invention, and new independent claim 46 more broadly recites that the reflection mirror is provided integrally at a lower portion of the condenser lens.

With this structure, an integral path is provided for the laser beam to the condenser lens, whereby fluorescent observation can be implemented with total internal reflection, irrespective of the numerical aperture or magnification of the objective lens, by controlling the application of the laser beam onto the specimen via the condenser lens.

It is respectfully submitted that none of the cited references disclose, teach or suggest this feature of the claimed present invention.

By contrast, according to Axelrod, the mirror M is provided in the base of the microscope in between the converging lens and the prism P for total internal reflection (Fig. 5), and the prism P is retained by a condenser receiver.

Wolf et al and Baer, moreover, have merely been cited for the disclosure of moving a mirror.

Accordingly, it is respectfully submitted that amended independent claim 1, claim 2 depending therefrom, and new independent claims 45 and 46 all clearly patentably distinguish over the cited references, taken singly or in any combination, under 35 USC 102 as well as under 35 USC 103.

* *

In view of the foregoing, entry of this Amendment, allowance of the claims and the passing of this application to issue are respectfully solicited.

If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned for prompt action.

Respectfully submitted,

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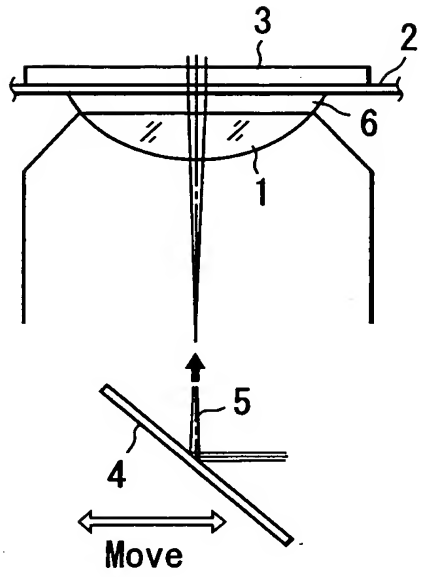

FIG. 17A
(PRIOR ART)

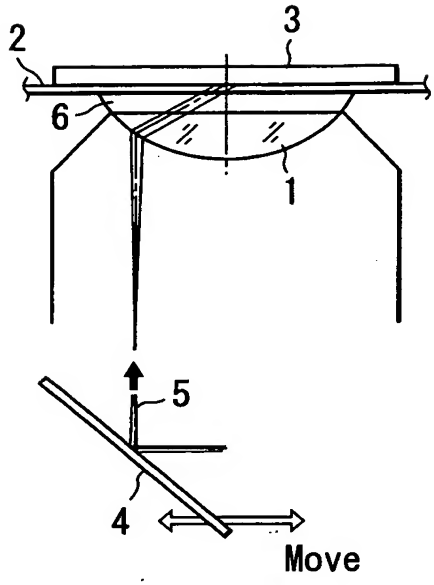

FIG. 17B
(PRIOR ART)

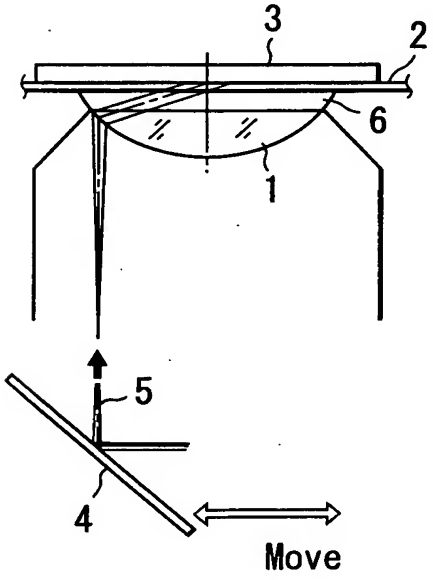

FIG. 17C
(PRIOR ART)

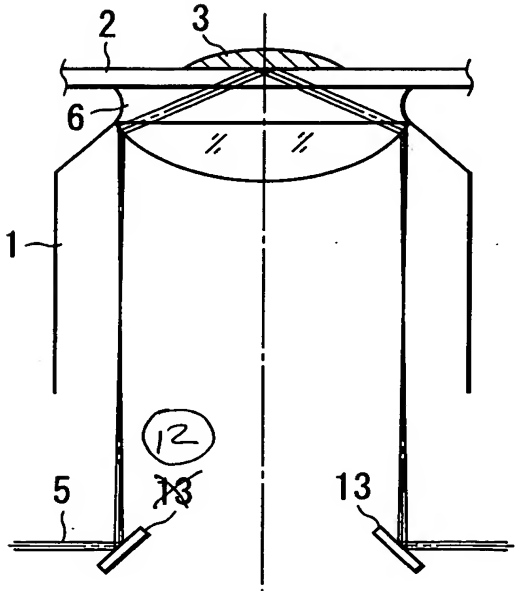

FIG. 19
(PRIOR ART)

LABEL ADDED